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Fig.1

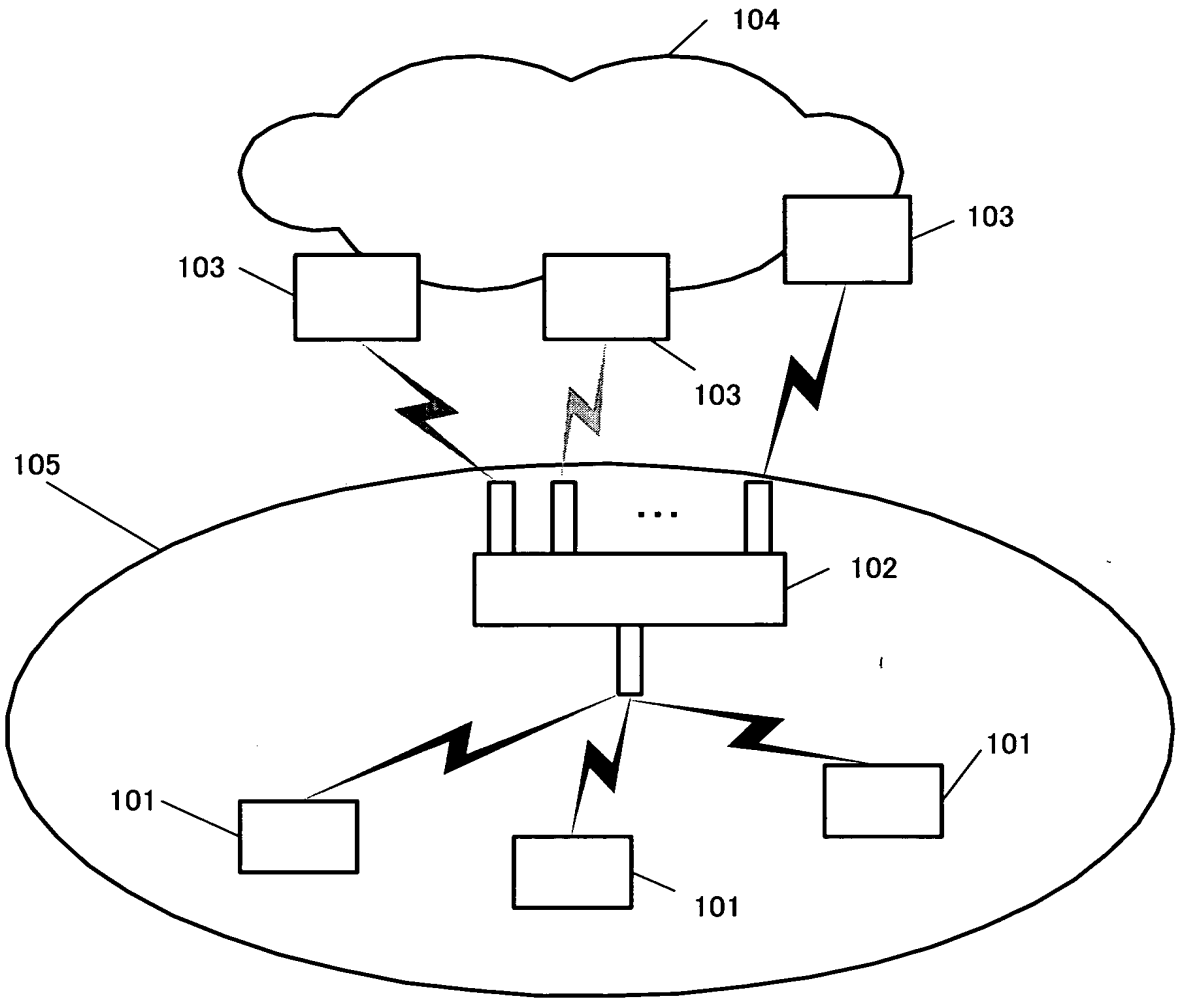

Fig.2

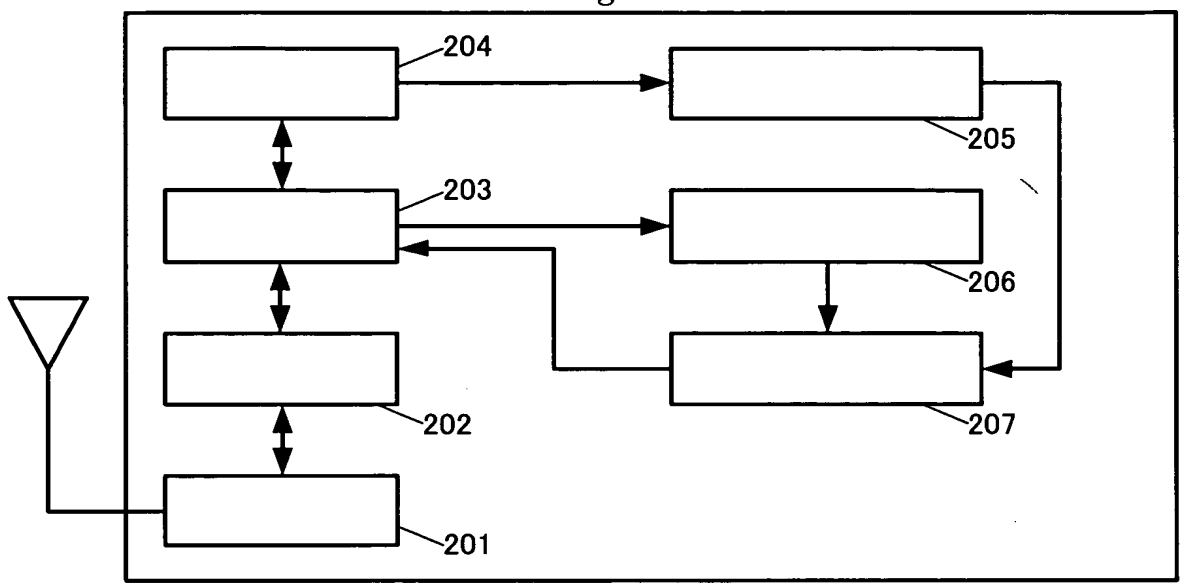

Fig.3

301 FLAG	302 SERVICE	303 SPEED	304 VOICE	305 MOVING IMAGE	306 AREA	307 PRIVACY	308 PRICE
VALID	VOICE COMMUNICATION	B	AA	B	AA	AA	A
VALID	INTERNET	AA	B	B	A	B	AA
VALID	MOVING-IMAGE COMMUNICATION	AA	B	AA	A	AA	A

Fig.4

301 FLAG	302 SERVICE	303 SPEED	304 VOICE	305 MOVING IMAGE	306 AREA	307 PRIVACY	308 PRICE
INVALID	VOICE COMMUNICATION	B	AA	B	AA	AA	A
401 VALID	INTERNET	AA	B	B	A	B	AA
402 VALID	MOVING-IMAGE COMMUNICATION	AA	B	AA	A	AA	A

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Fig.5

501 COMMUNICATION DEVICE IDENTIFIER	502 INTERFACE TYPE (1)	503 INTERFACE TYPE (2)	504 INTERFACE TYPE (3)
3ffe:501::100:204:b1ff:fe98:3e9	IEEE802.11a	W-CDMA	PDC

Fig.6

601 TYPE	602 SPEED	603 VOICE	604 MOVING IMAGE	605 AREA	606 PRIVACY	607 PRICE
CDMA2000	2	5	3	3	5	2
W-CDMA	3	5	4	2	5	1
IEEE802.11a	5	3	2	2	3	5
IEEE802.11b	4	1	1	2	3	5
IEEE802.11e	5	4	5	1	3	5
PHS	2	5	2	3	5	3
PDC	1	5	1	5	5	3

Fig.7

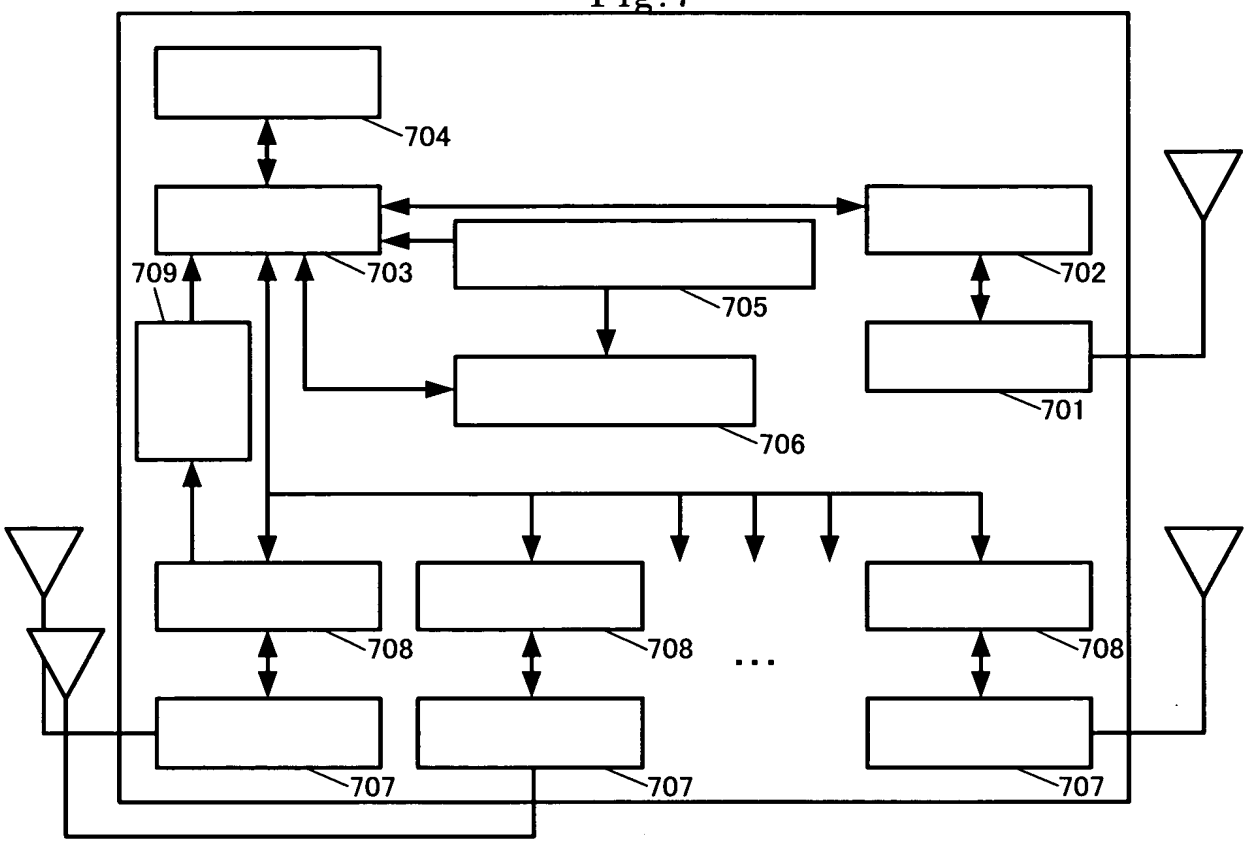

Fig.8

801 INTERFACE POSSESSED	802 INTERFACE ID	803 LINK STATUS
IEEE802.11a	3ffe:501:27:2210:33b7:25ff:fe44:3e77	CONNECTED
W-CDMA	3ffe:501:27:22:ddb5:acff:fe25:3382	CONNECTED
PDC	3ffe:501:27:dbe1:290:31ff:fe88:6621	CONNECTED

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Fig.9

MOBILE COMMUNICATION DEVICE IDENTIFIER (901)	INTERFACE TYPE (902)
3ffe:501::100:3226:bdff:fe20:667d	W-CDMA

Fig.10

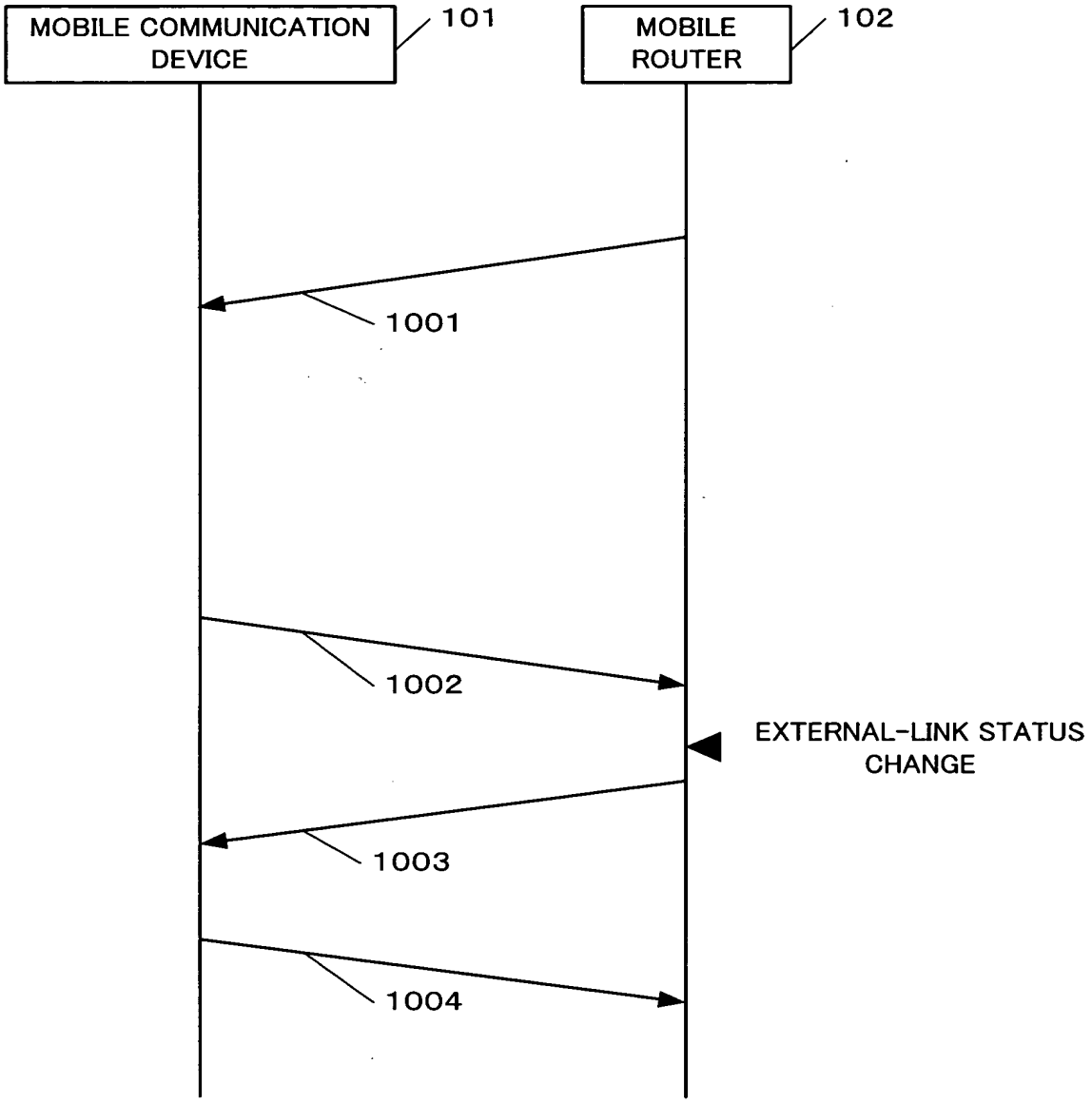

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Fig.11

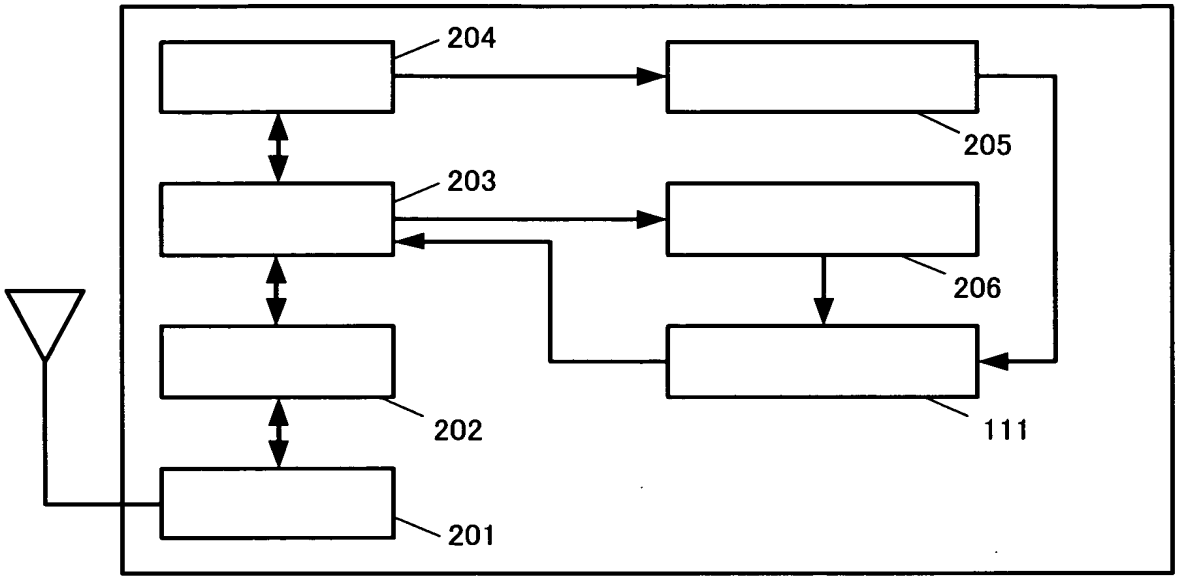

Fig.12

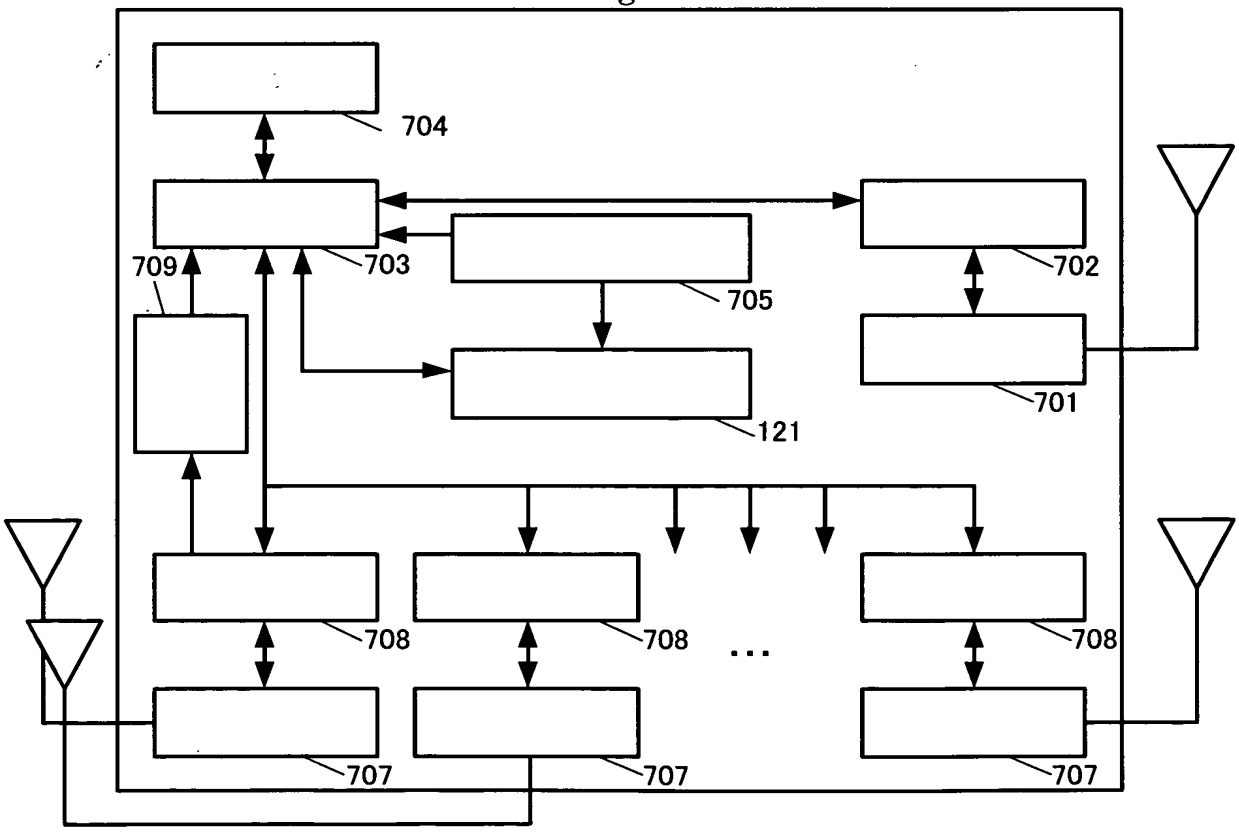

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Fig.13

MOBILE COMMUNICATION DEVICE (1301)	INTERFACE TYPE (1302)
3ffe:501::100:3226:bdff:fe20:667d	W-CDMA
	IEEE802.11a

Fig.14

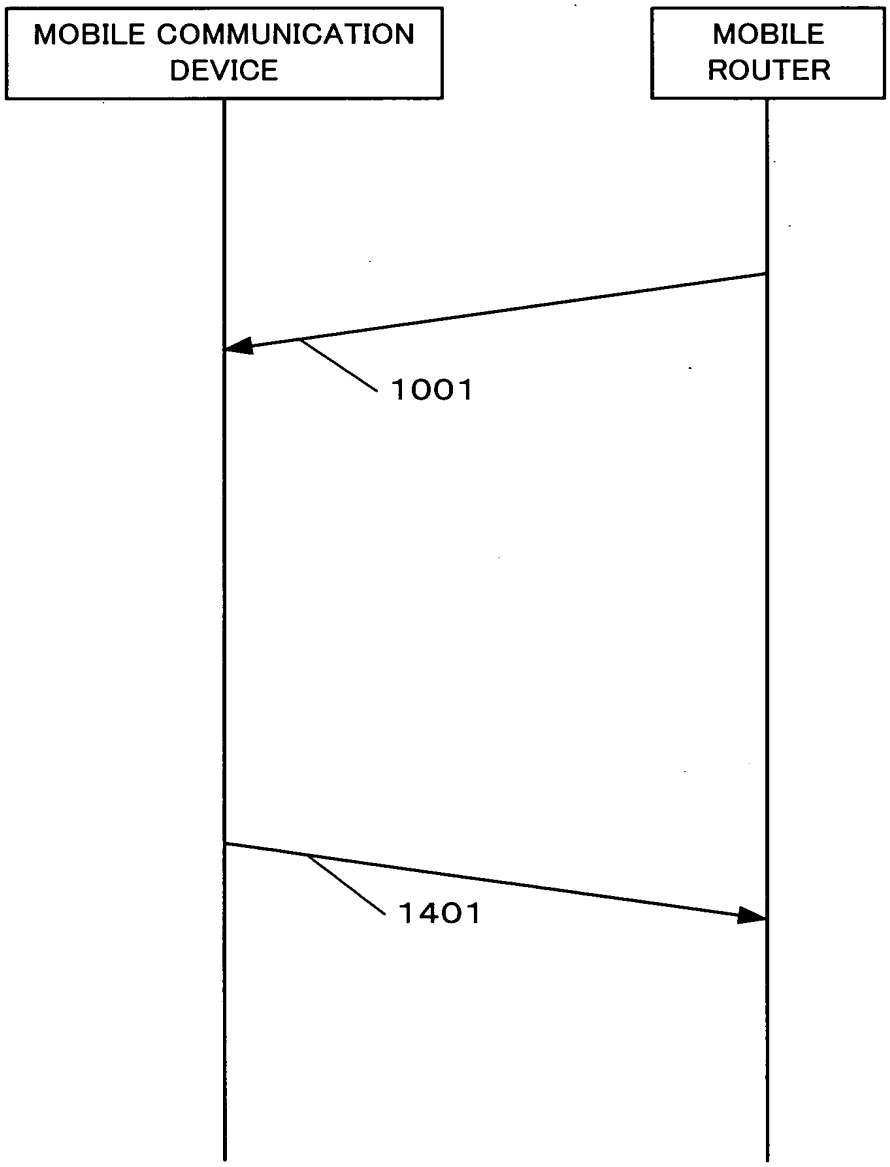

Fig.15

1501 MOBILE COMMUNICATION DEVICE IDENTIFIER	1502 INTERFACE TYPE	1503 PRIORITY
3ffe:501::100:3226:bdff:fe20:667d	W-CDMA	1
	IEEE802.11a	2

Fig.16

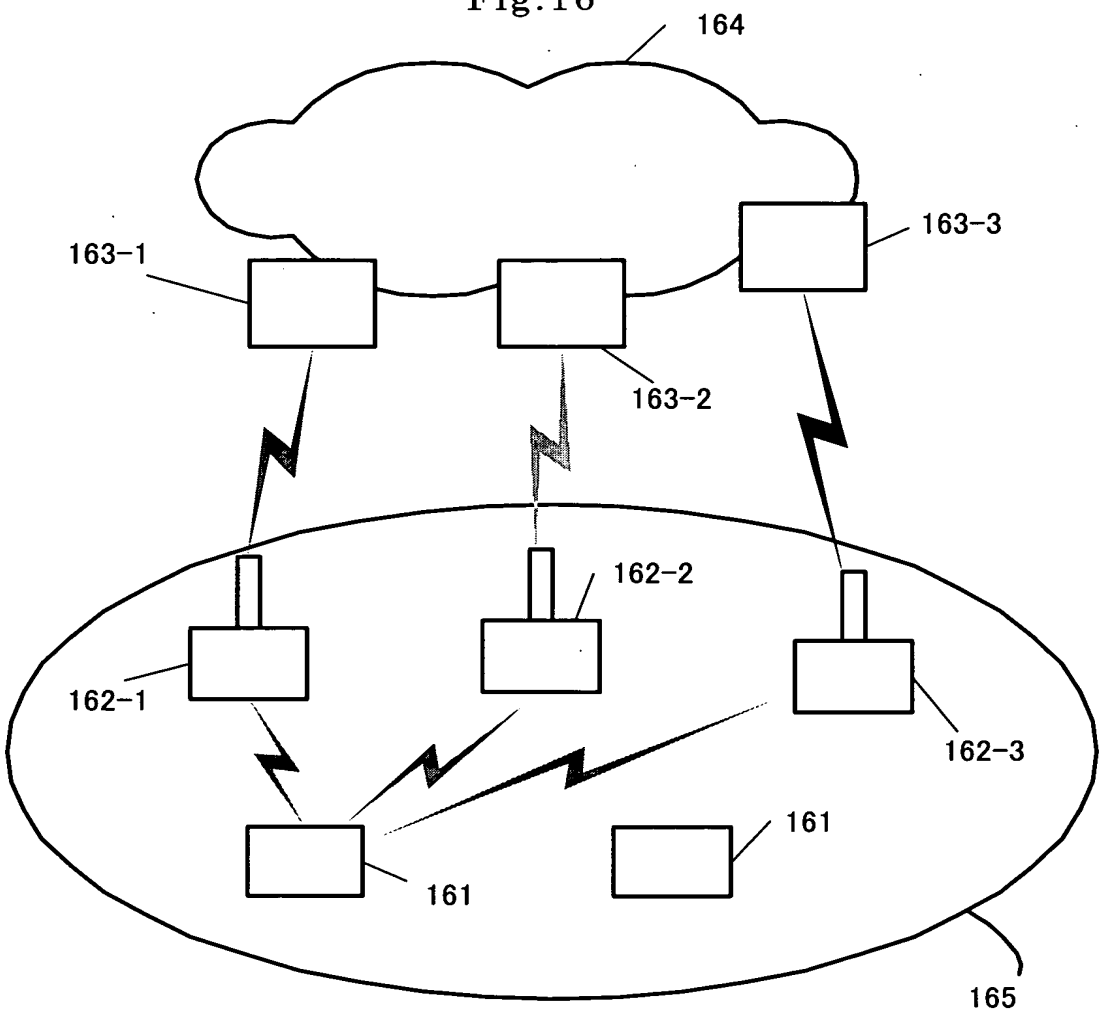

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Fig.17

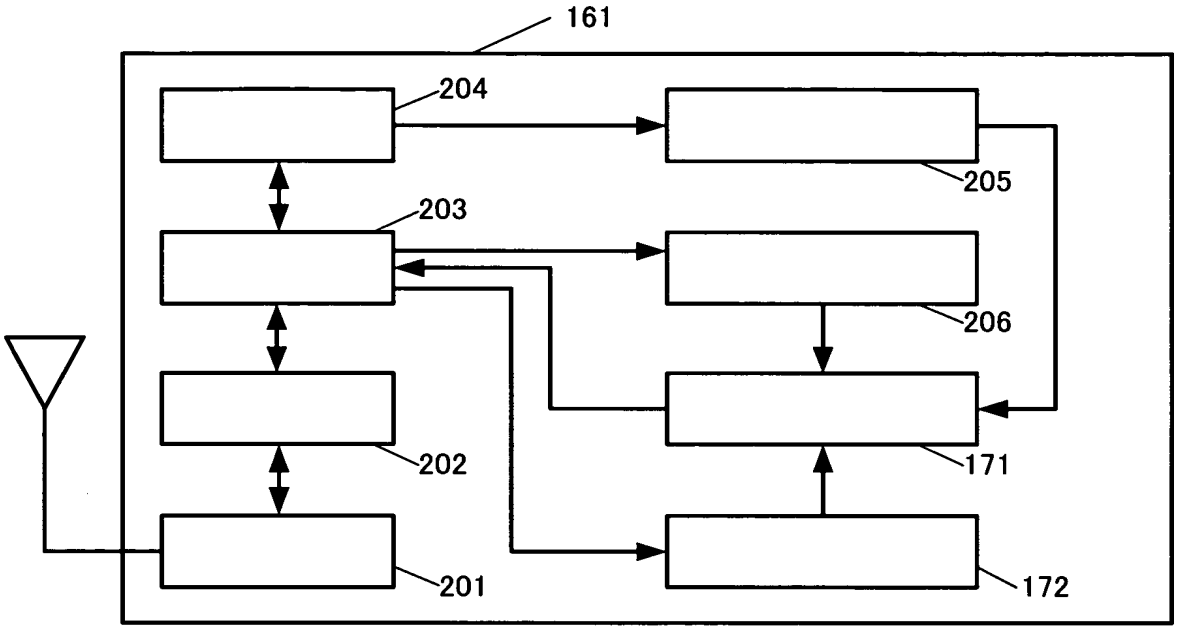

Fig.18

1801 MOBILE ROUTER IDENTIFIER	1802 INTERFACE TYPE	1803 LINK STATUS	1804 PRIORITY
3ffe:501::100:204:b1ff:fe98:3e9	IEEE802.11a	CONNECTED	2
3ffe:501:221:10:312:26ff:fe14:2805	W-CDMA	CONNECTED	1
3ffe:501:5:187:104:eeff:fe31:7729	PDC	CONNECTED	3

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Fig.19

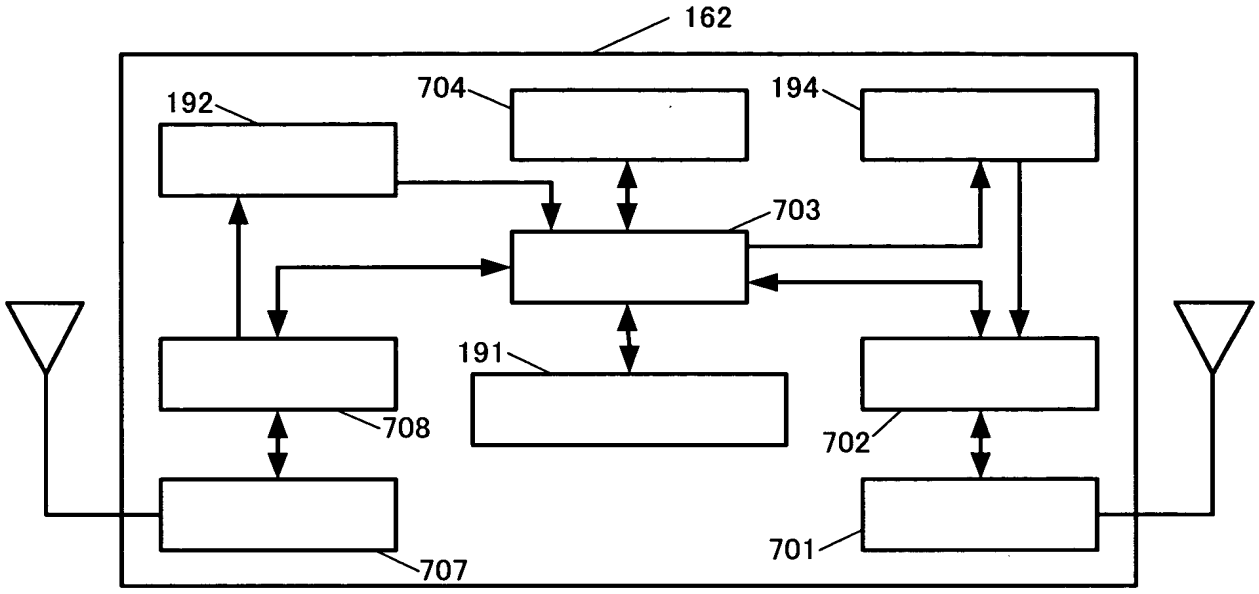

Fig.20

2001 MOBILE COMMUNICATION DEVICE IDENTIFIER	2002 MOBILE ROUTER IDENTIFIER	2003 INTERFACE TYPE	2004 LINK STATUS	2005 PRIORITY
3ffe:501::100:3226:bdff:fe20:667d	3ffe:501::100:204:b1ff:fe98:3e9	W-CDMA	CONNECTED	1
	3ffe:501:221:10:312:26ff:fe14:2805	IEEE802.11a	CONNECTED	2

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Fig.21

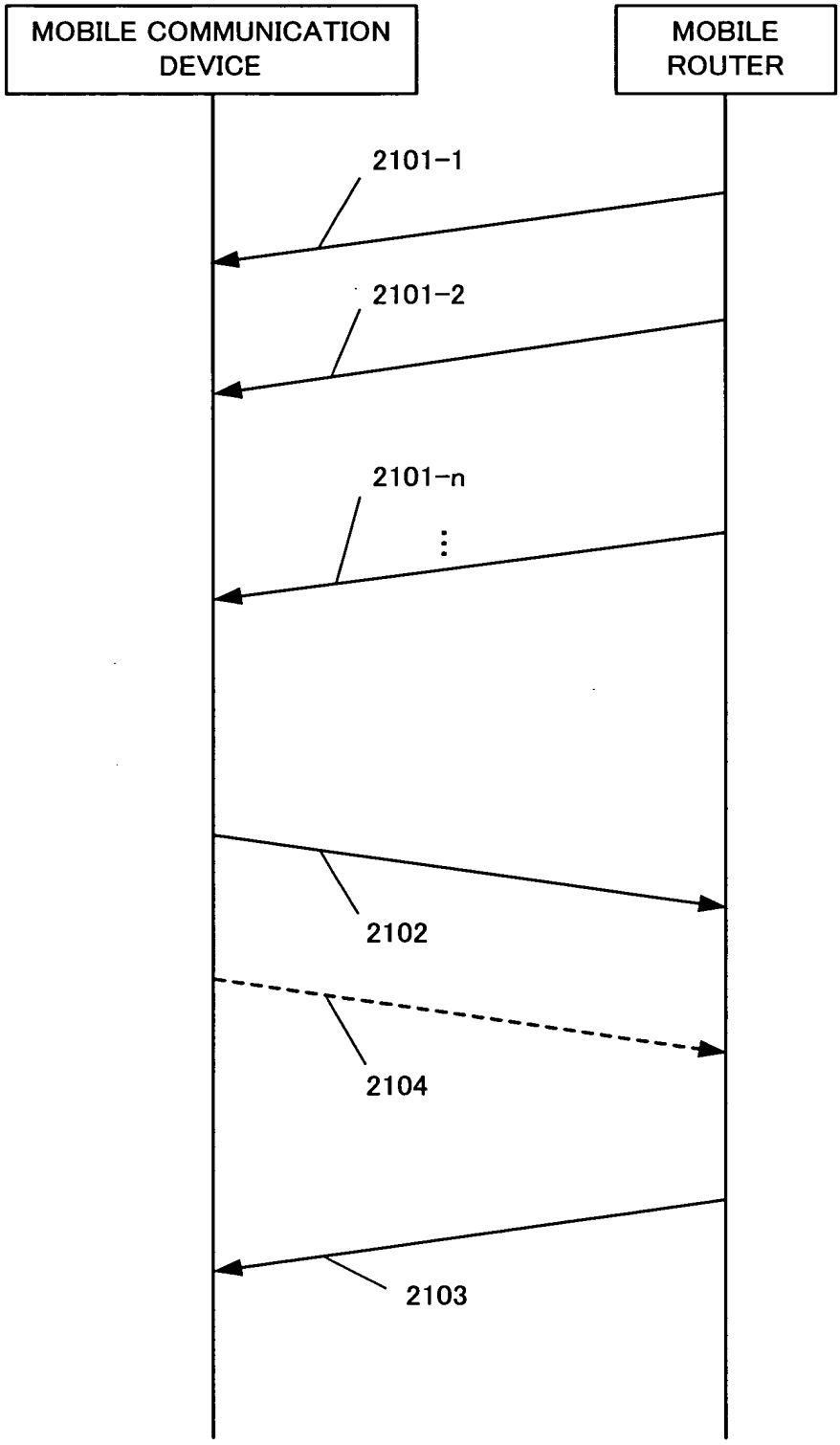

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Fig.22A

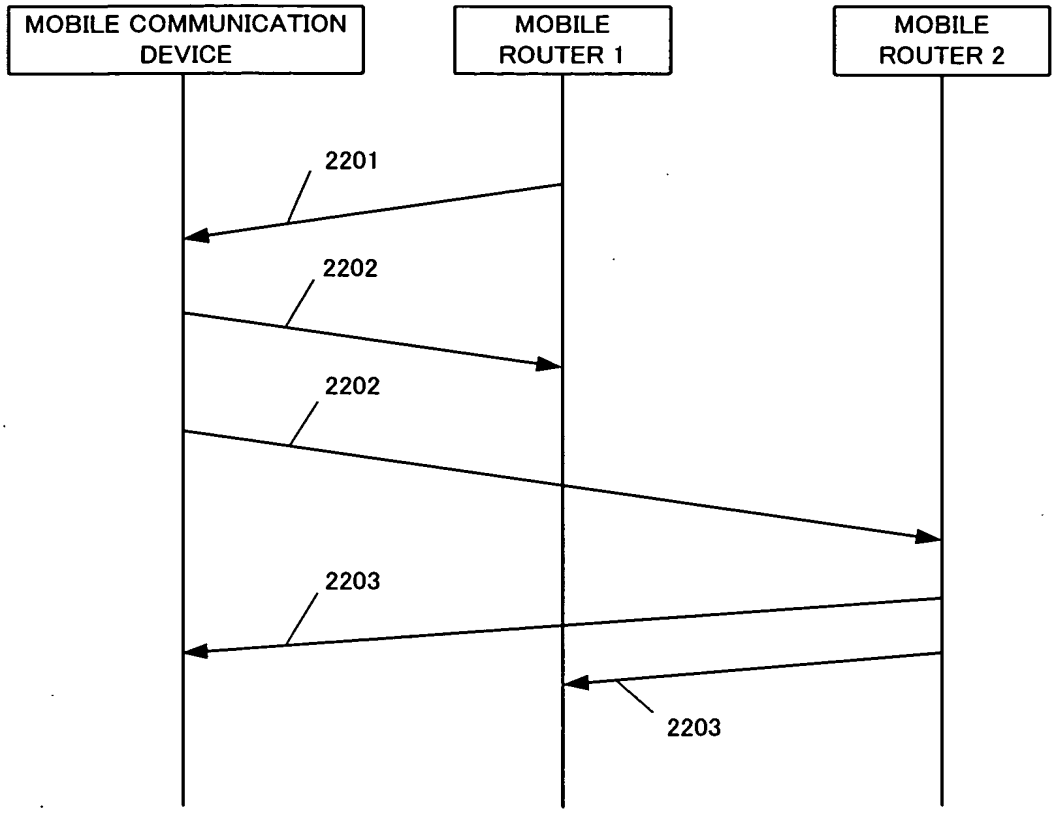

Fig.22B

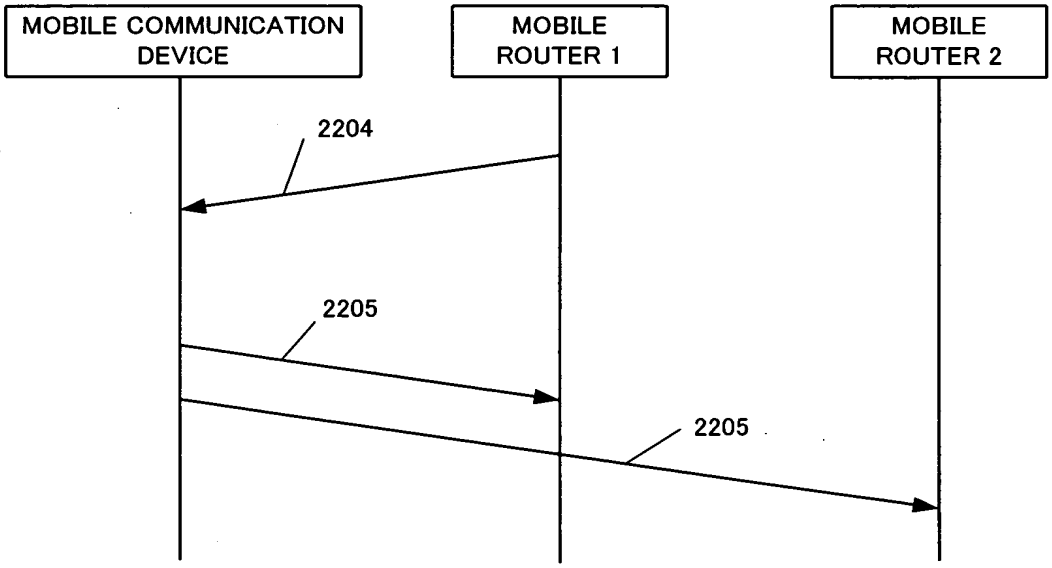

Fig.23

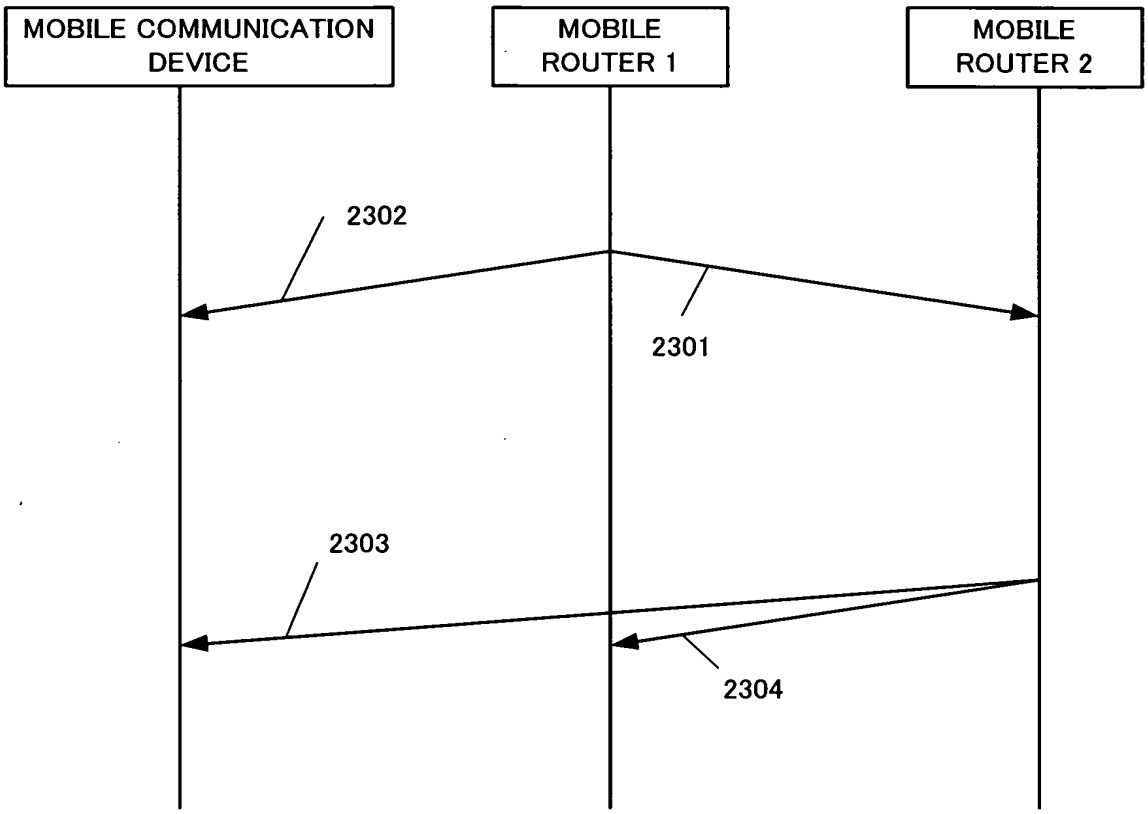
MOBILE COMMUNICATION DEVICE
MOBILE ROUTER 1
MOBILE ROUTER 2
2302
2301
2303
2304

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FIG.24

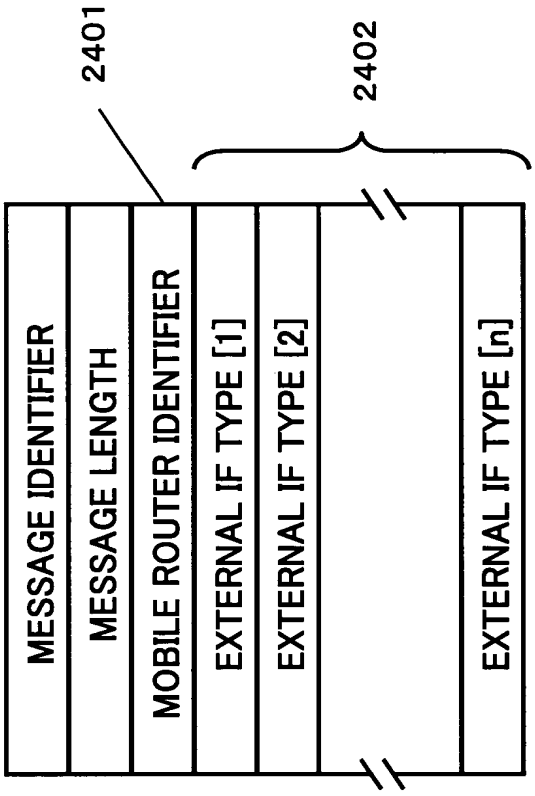

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FIG.25A

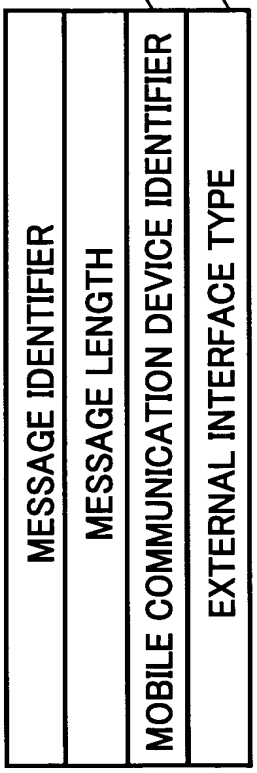


FIG.25B

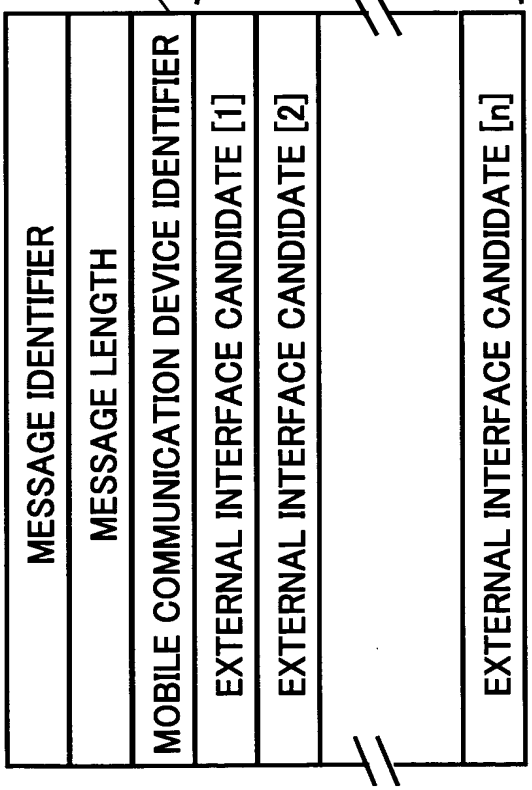
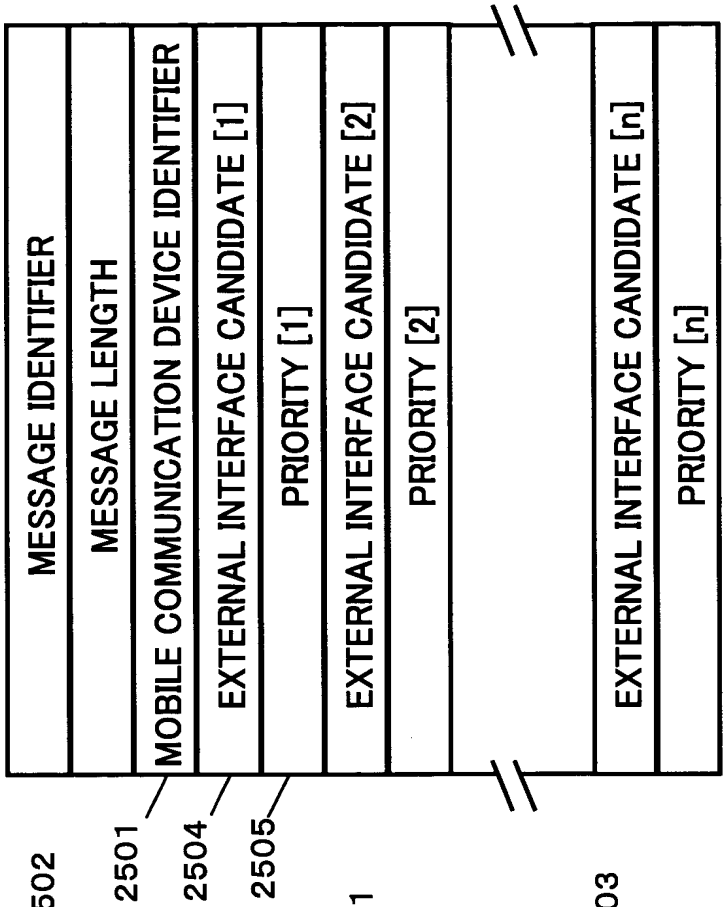


FIG.25C



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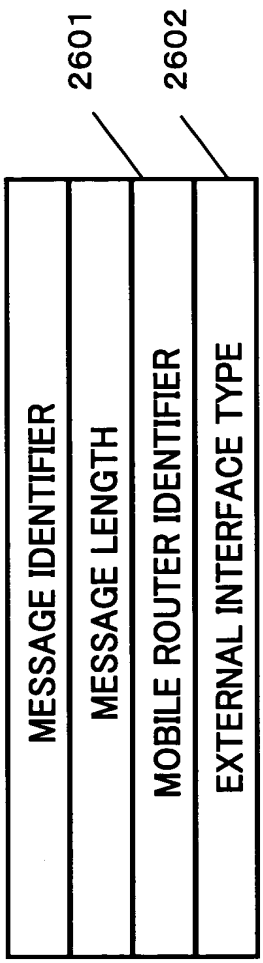

FIG.26A

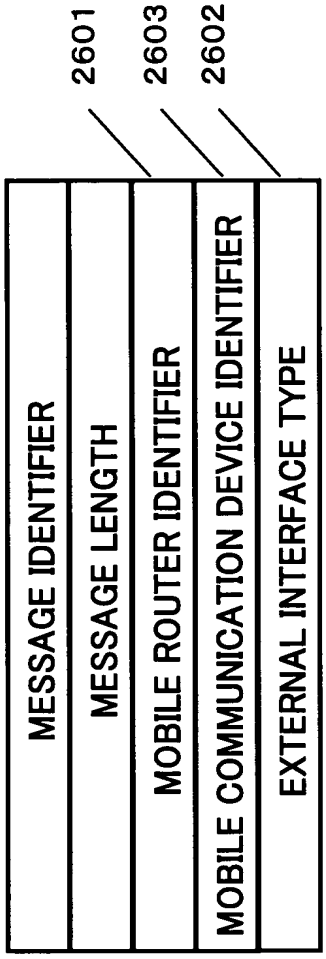

FIG.26B

Fig.27

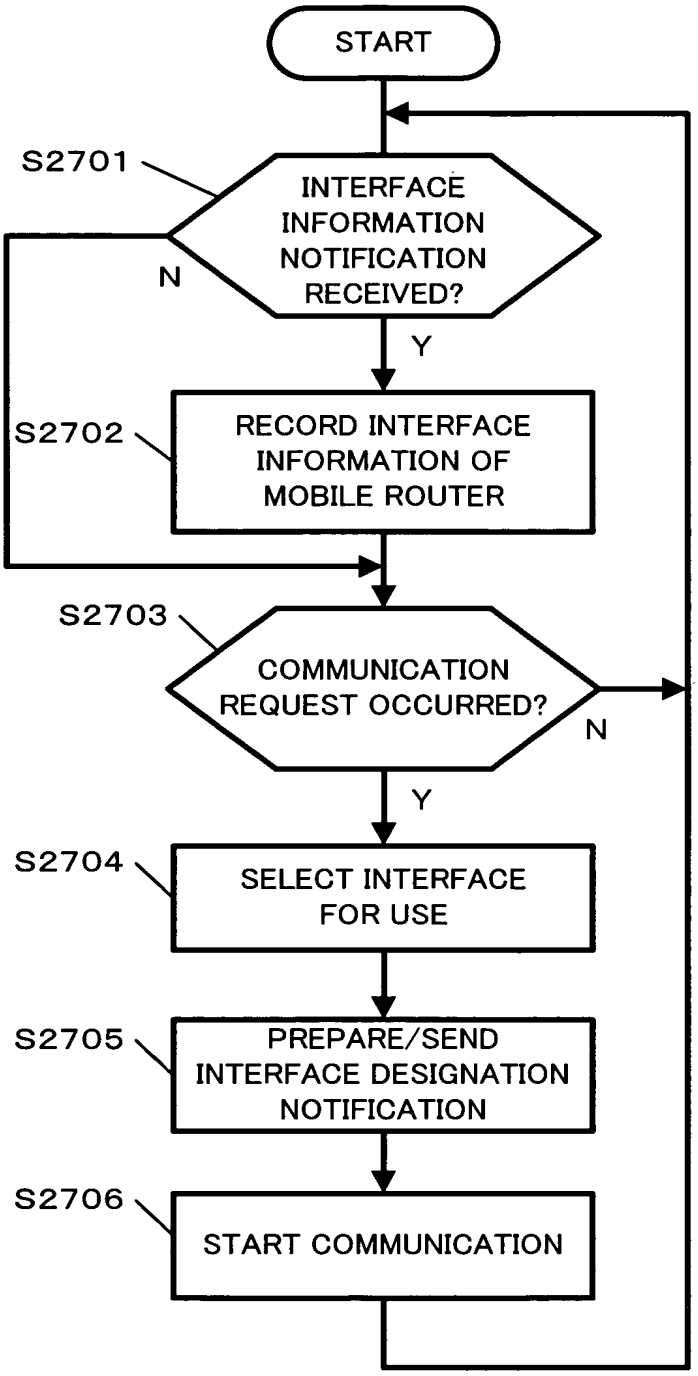
START
S2701
INTERFACE INFORMATION NOTIFICATION RECEIVED?
N
Y
S2702
RECORD INTERFACE INFORMATION OF MOBILE ROUTER
S2703
COMMUNICATION REQUEST OCCURRED?
N
Y
S2704
SELECT INTERFACE FOR USE
S2705
PREPARE/SEND INTERFACE DESIGNATION NOTIFICATION
S2706
START COMMUNICATION

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Fig.28

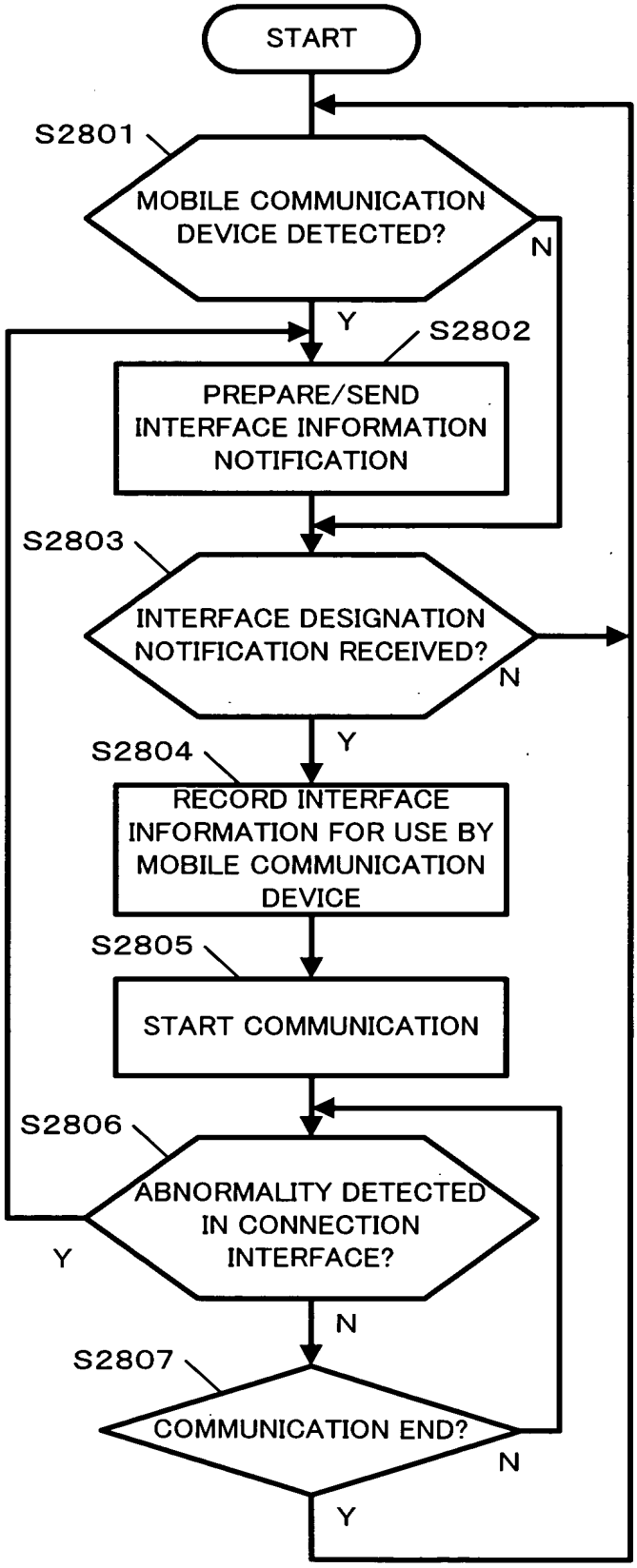

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Fig.29

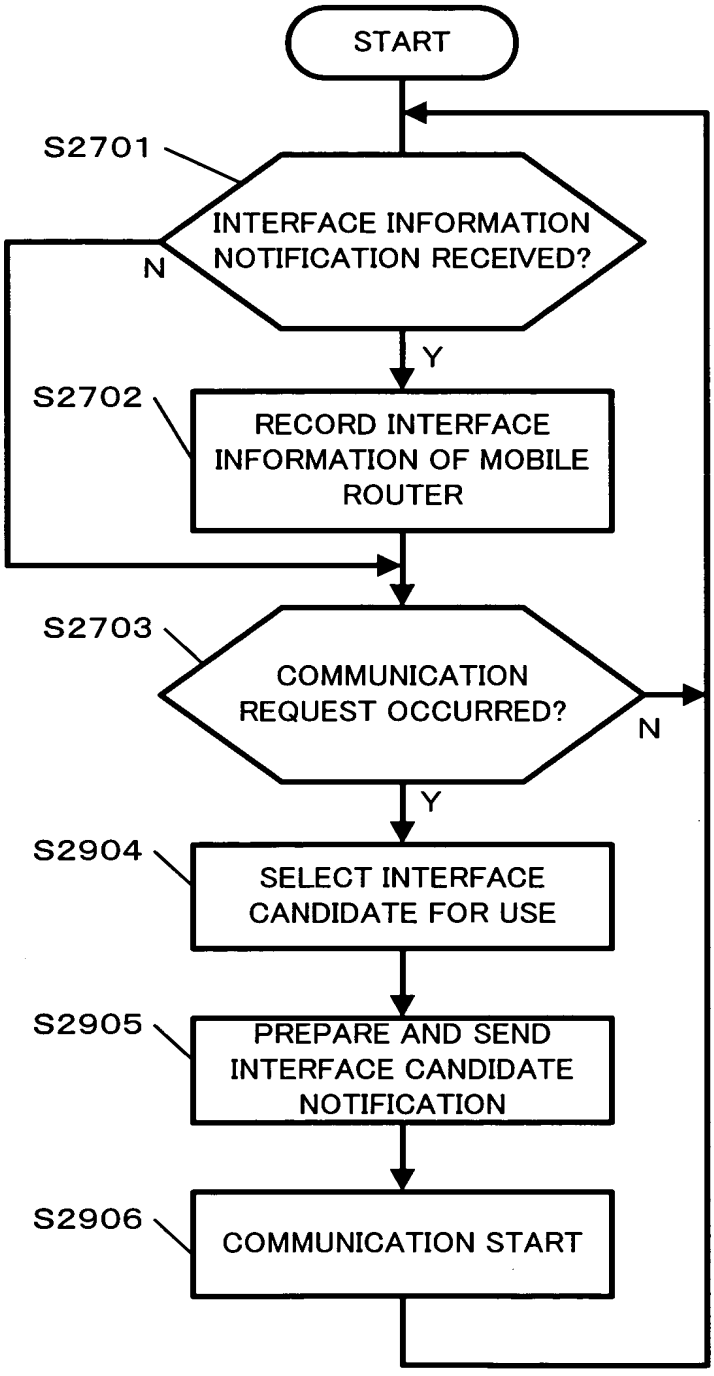

Fig.30

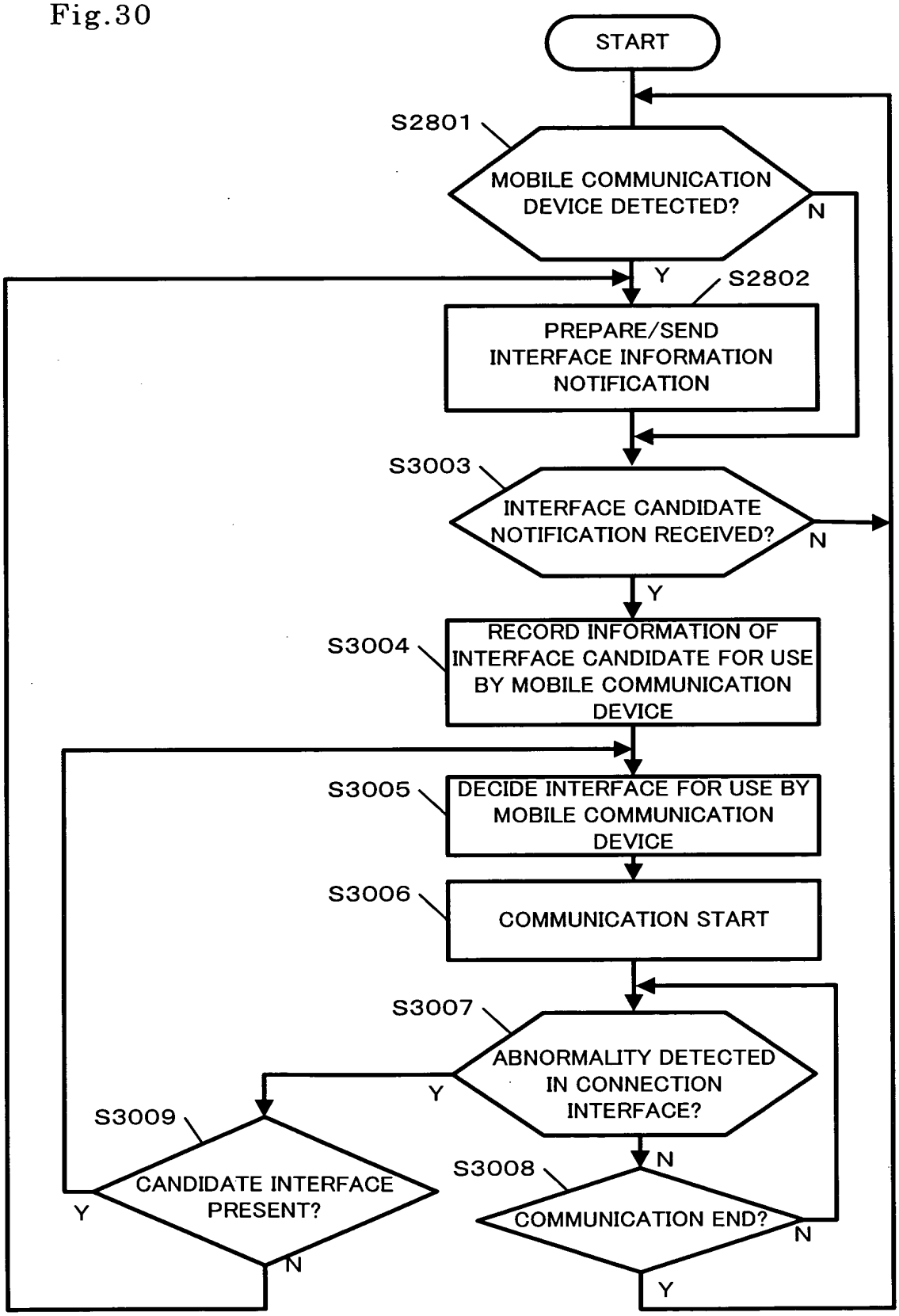
START
S2801
MOBILE COMMUNICATION DEVICE DETECTED?
N
Y
S2802
PREPARE/SEND INTERFACE INFORMATION NOTIFICATION
S3003
INTERFACE CANDIDATE NOTIFICATION RECEIVED?
N
Y
S3004
RECORD INFORMATION OF INTERFACE CANDIDATE FOR USE BY MOBILE COMMUNICATION DEVICE
S3005
DECIDE INTERFACE FOR USE BY MOBILE COMMUNICATION DEVICE
S3006
COMMUNICATION START
S3007
ABNORMALITY DETECTED IN CONNECTION INTERFACE?
Y
N
S3009
CANDIDATE INTERFACE PRESENT?
Y
N
S3008
COMMUNICATION END?
N
Y

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Fig.31

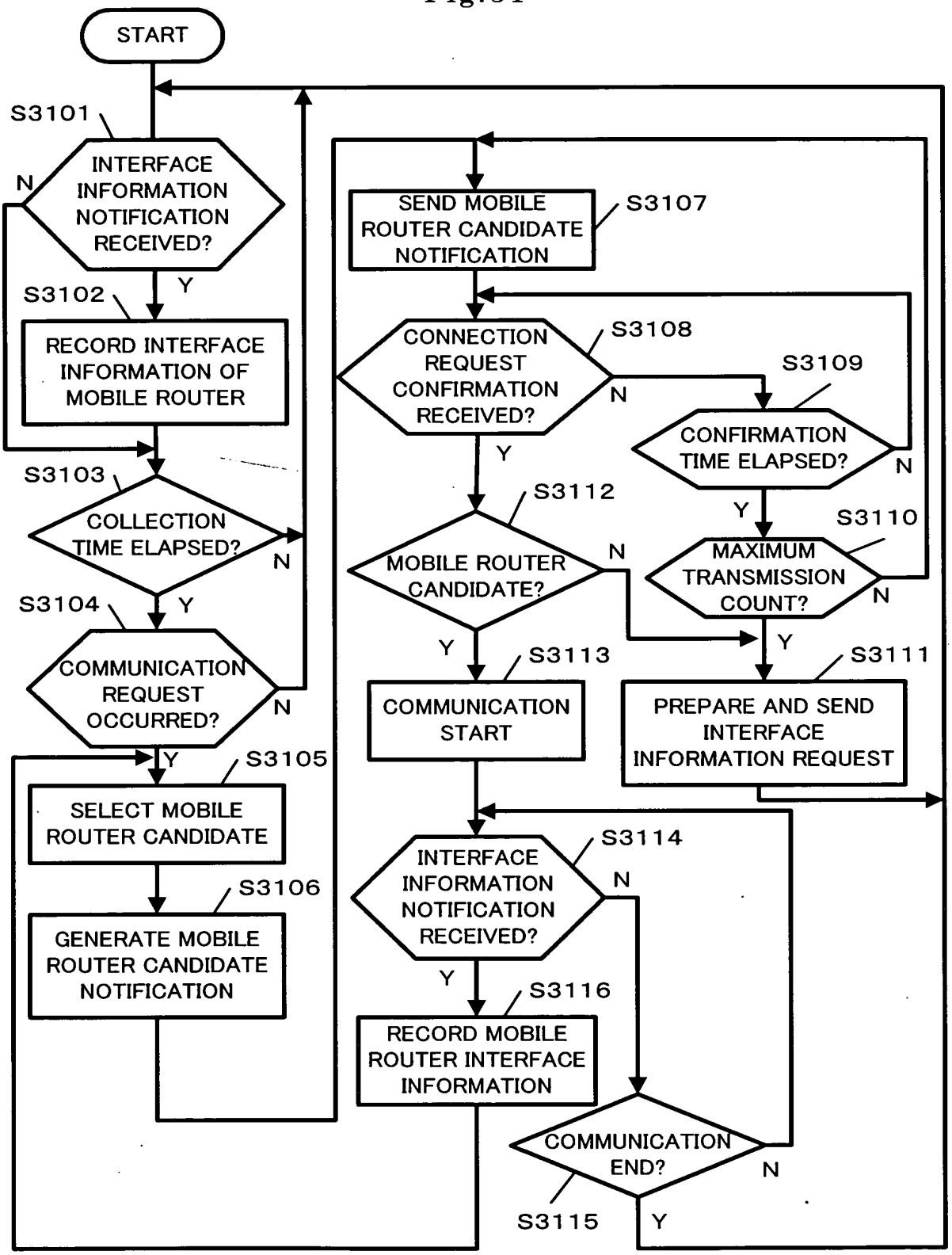

Fig.32

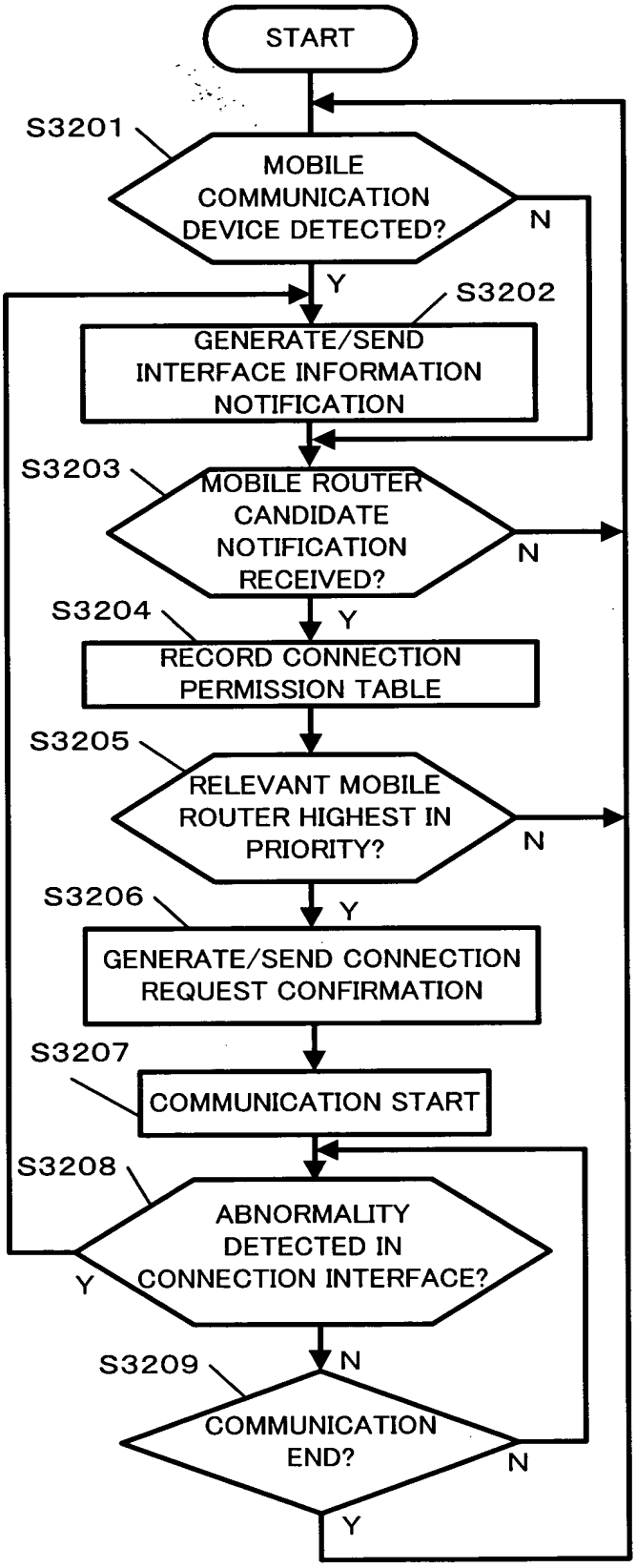
START
S3201
MOBILE COMMUNICATION DEVICE DETECTED?
N
Y
S3202
GENERATE/SEND INTERFACE INFORMATION NOTIFICATION
S3203
MOBILE ROUTER CANDIDATE NOTIFICATION RECEIVED?
N
Y
S3204
RECORD CONNECTION PERMISSION TABLE
S3205
RELEVANT MOBILE ROUTER HIGHEST IN PRIORITY?
N
Y
S3206
GENERATE/SEND CONNECTION REQUEST CONFIRMATION
S3207
COMMUNICATION START
S3208
ABNORMALITY DETECTED IN CONNECTION INTERFACE?
Y
N
S3209
COMMUNICATION END?
N
Y

FIG.33

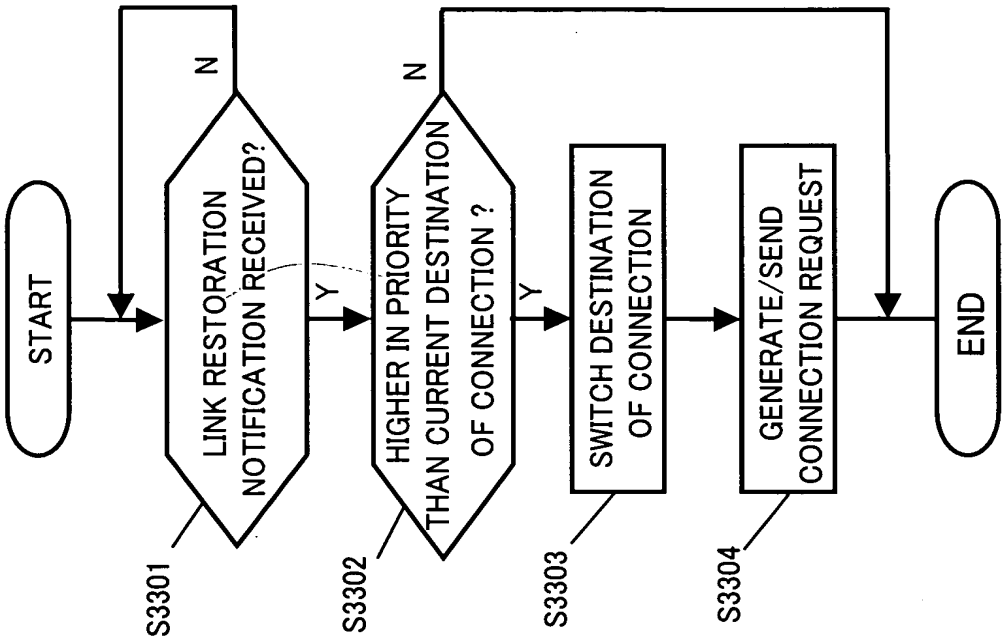
START
LINK RESTORATION NOTIFICATION RECEIVED?
N
Y
HIGHER IN PRIORITY THAN CURRENT DESTINATION OF CONNECTION ?
N
Y
SWITCH DESTINATION OF CONNECTION
GENERATE/SEND CONNECTION REQUEST
END
S3301
S3302
S3303
S3304

FIG.34

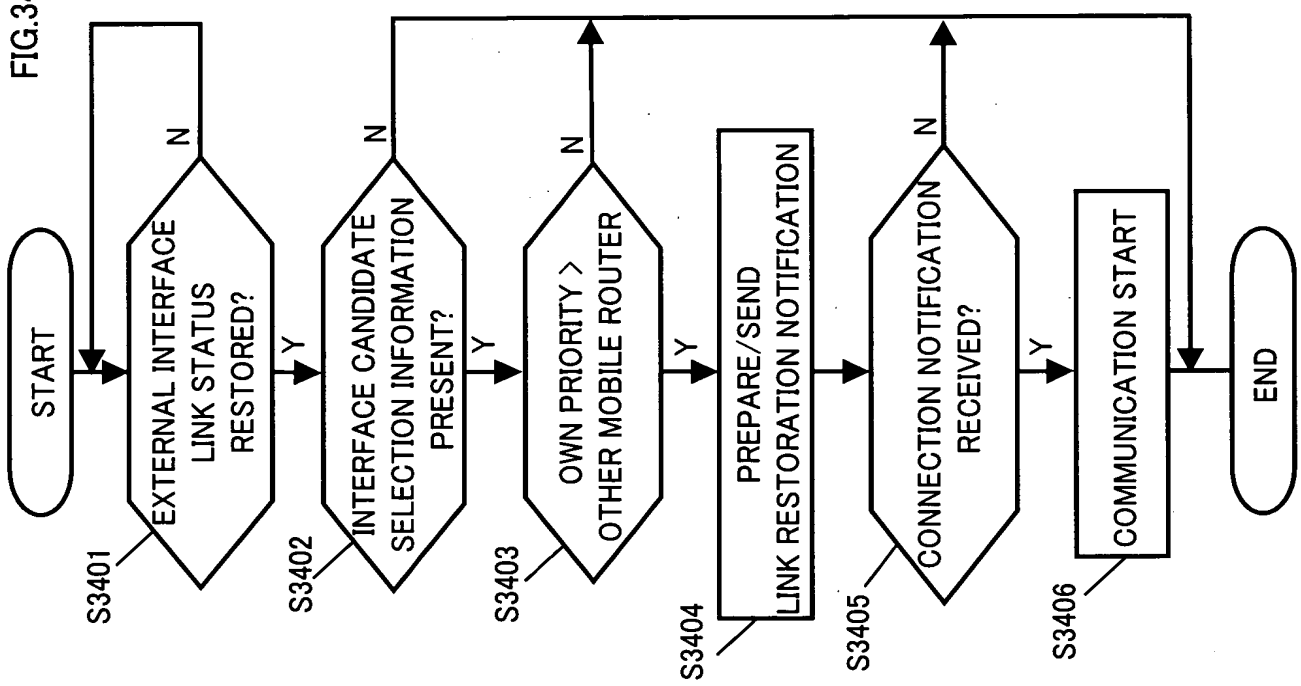
START
EXTERNAL INTERFACE LINK STATUS RESTORED?
N
Y
S3401
INTERFACE CANDIDATE SELECTION INFORMATION PRESENT?
N
Y
S3402
OWN PRIORITY > OTHER MOBILE ROUTER
N
Y
S3403
PREPARE/SEND LINK RESTORATION NOTIFICATION
S3404
CONNECTION NOTIFICATION RECEIVED?
N
Y
S3405
COMMUNICATION START
S3406
END

FIG.35

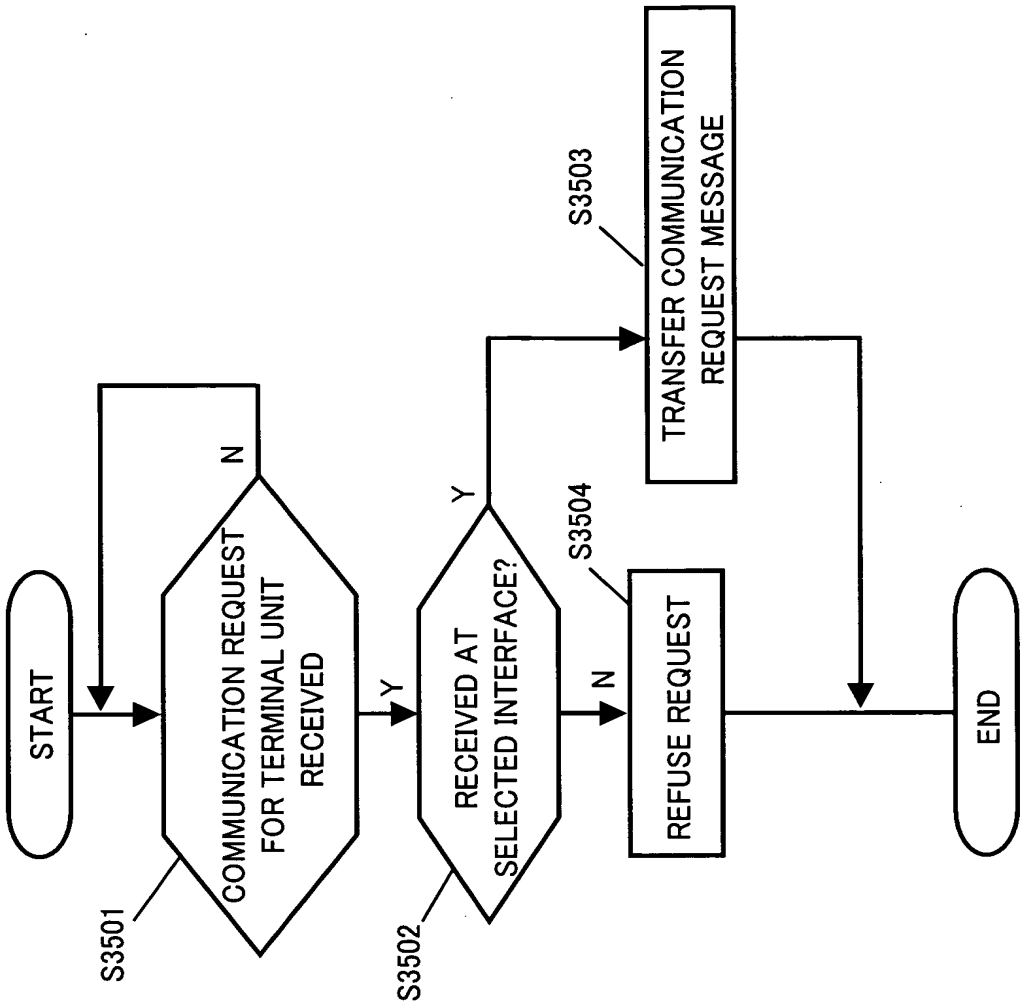
START
COMMUNICATION REQUEST FOR TERMINAL UNIT RECEIVED
S3501
N
Y
RECEIVED AT SELECTED INTERFACE?
S3502
Y
N
TRANSFER COMMUNICATION REQUEST MESSAGE
S3503
REFUSE REQUEST
S3504
END

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Fig.36

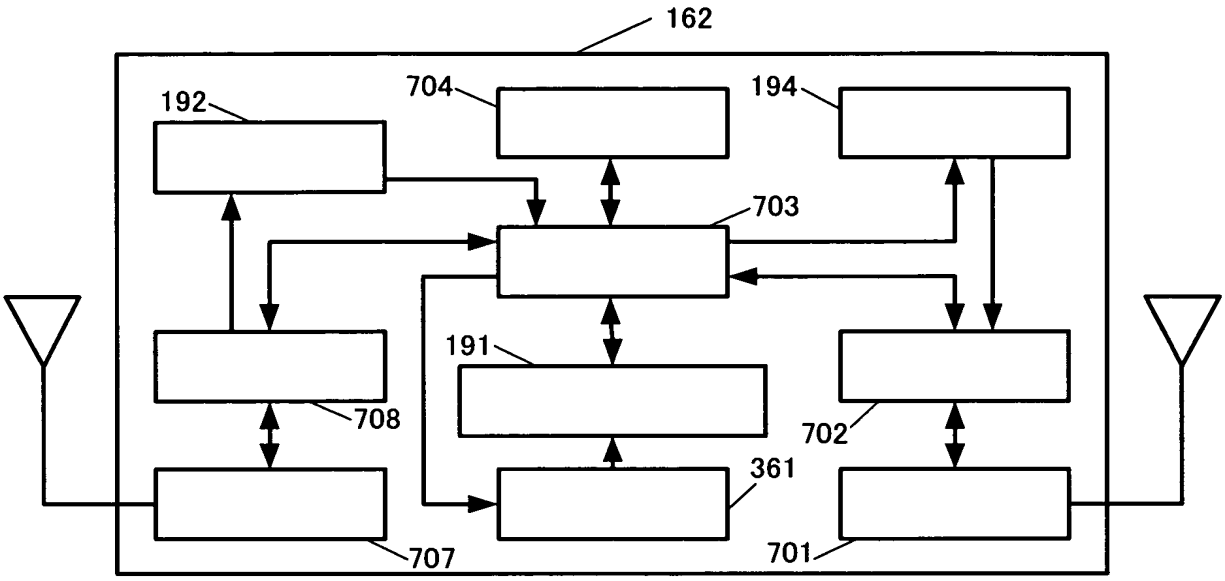

Fig.37

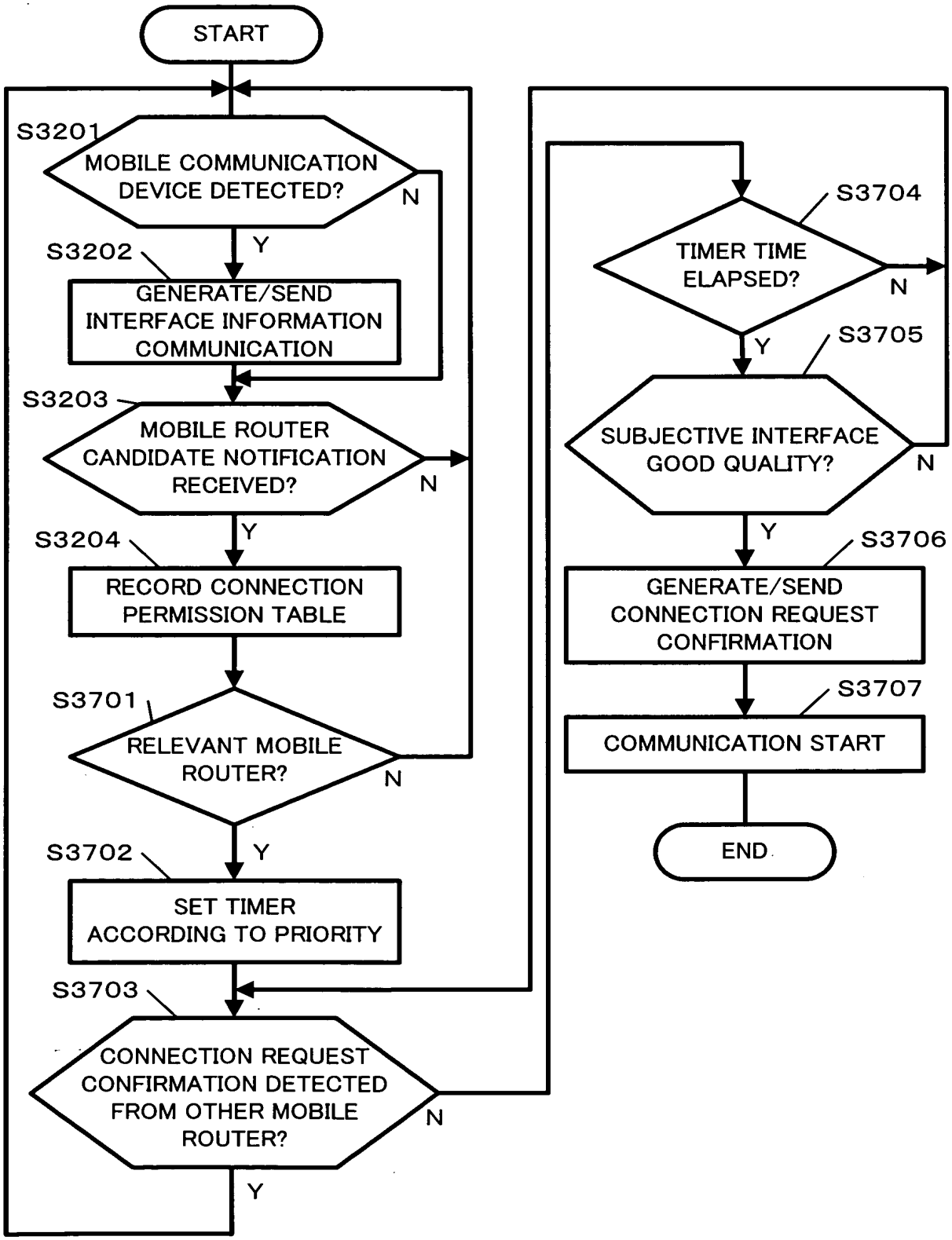
START
S3201
MOBILE COMMUNICATION DEVICE DETECTED?
N
Y
S3202
GENERATE/SEND INTERFACE INFORMATION COMMUNICATION
S3203
MOBILE ROUTER CANDIDATE NOTIFICATION RECEIVED?
N
Y
S3204
RECORD CONNECTION PERMISSION TABLE
S3701
RELEVANT MOBILE ROUTER?
N
Y
S3702
SET TIMER ACCORDING TO PRIORITY
S3703
CONNECTION REQUEST CONFIRMATION DETECTED FROM OTHER MOBILE ROUTER?
N
Y
S3704
TIMER TIME ELAPSED?
N
Y
S3705
SUBJECTIVE INTERFACE GOOD QUALITY?
N
Y
S3706
GENERATE/SEND CONNECTION REQUEST CONFIRMATION
S3707
COMMUNICATION START
END

Fig.38

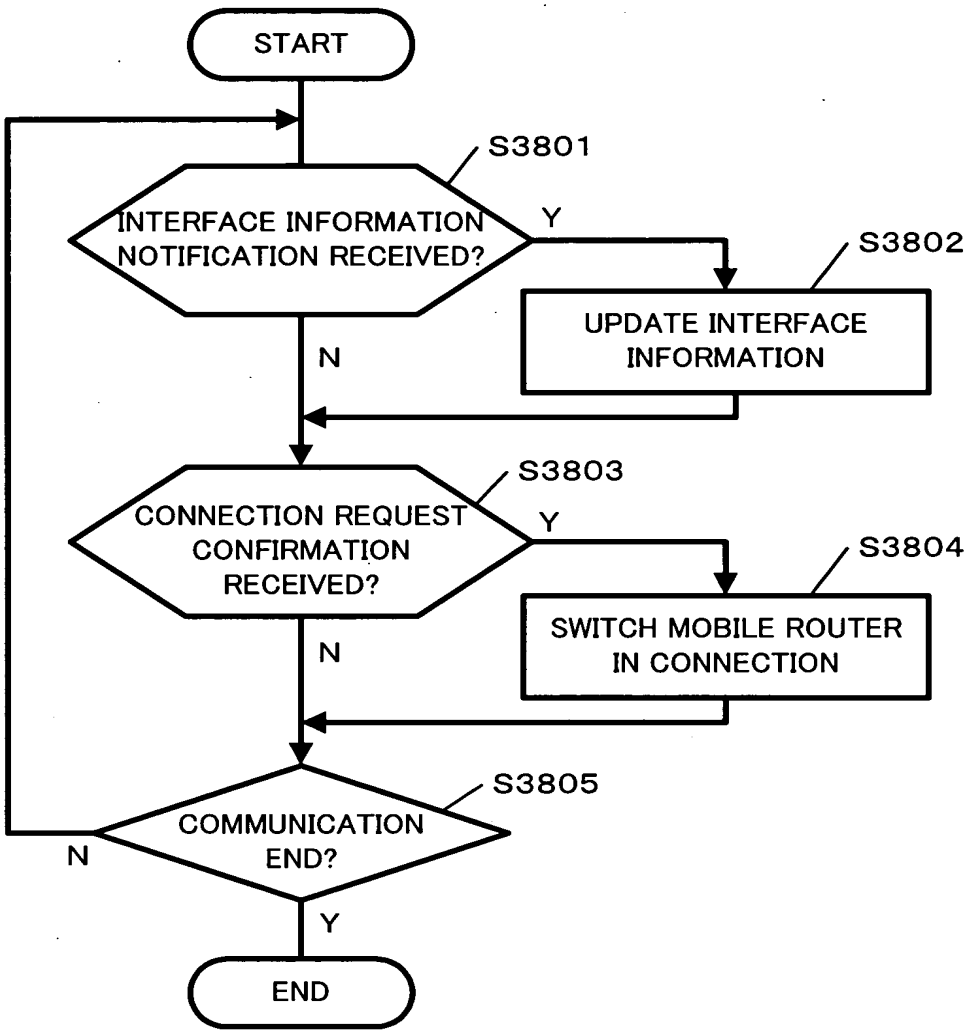
START
S3801
INTERFACE INFORMATION NOTIFICATION RECEIVED?
Y
S3802
UPDATE INTERFACE INFORMATION
N
S3803
CONNECTION REQUEST CONFIRMATION RECEIVED?
Y
S3804
SWITCH MOBILE ROUTER IN CONNECTION
N
S3805
COMMUNICATION END?
N
Y
END

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Fig.39

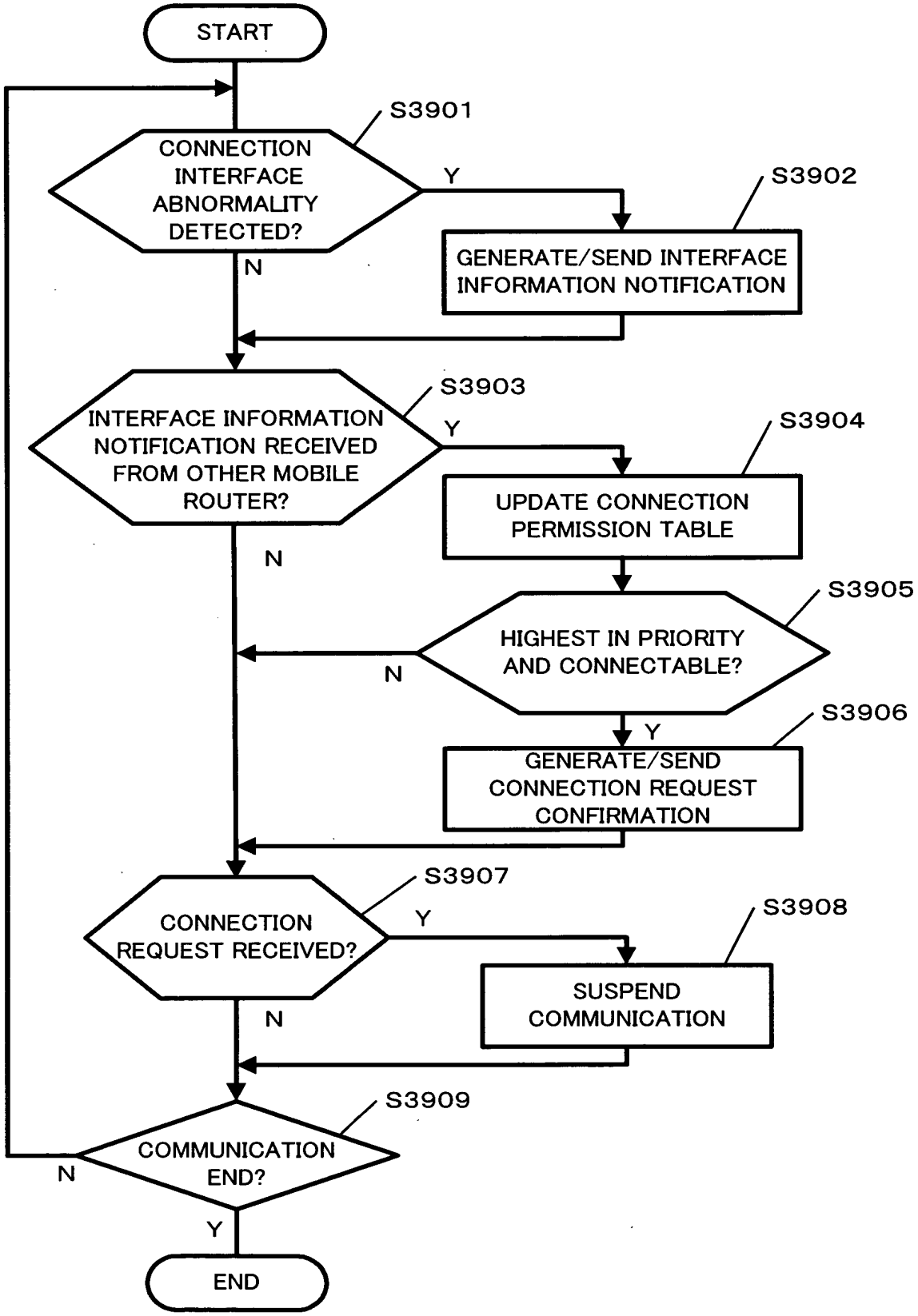


Fig.40

4001	4002
INTERFACE TYPE	LINK STATUS
W-CDMA	CONNECTED
IEEE802.11a	CONNECTED

FIG.41

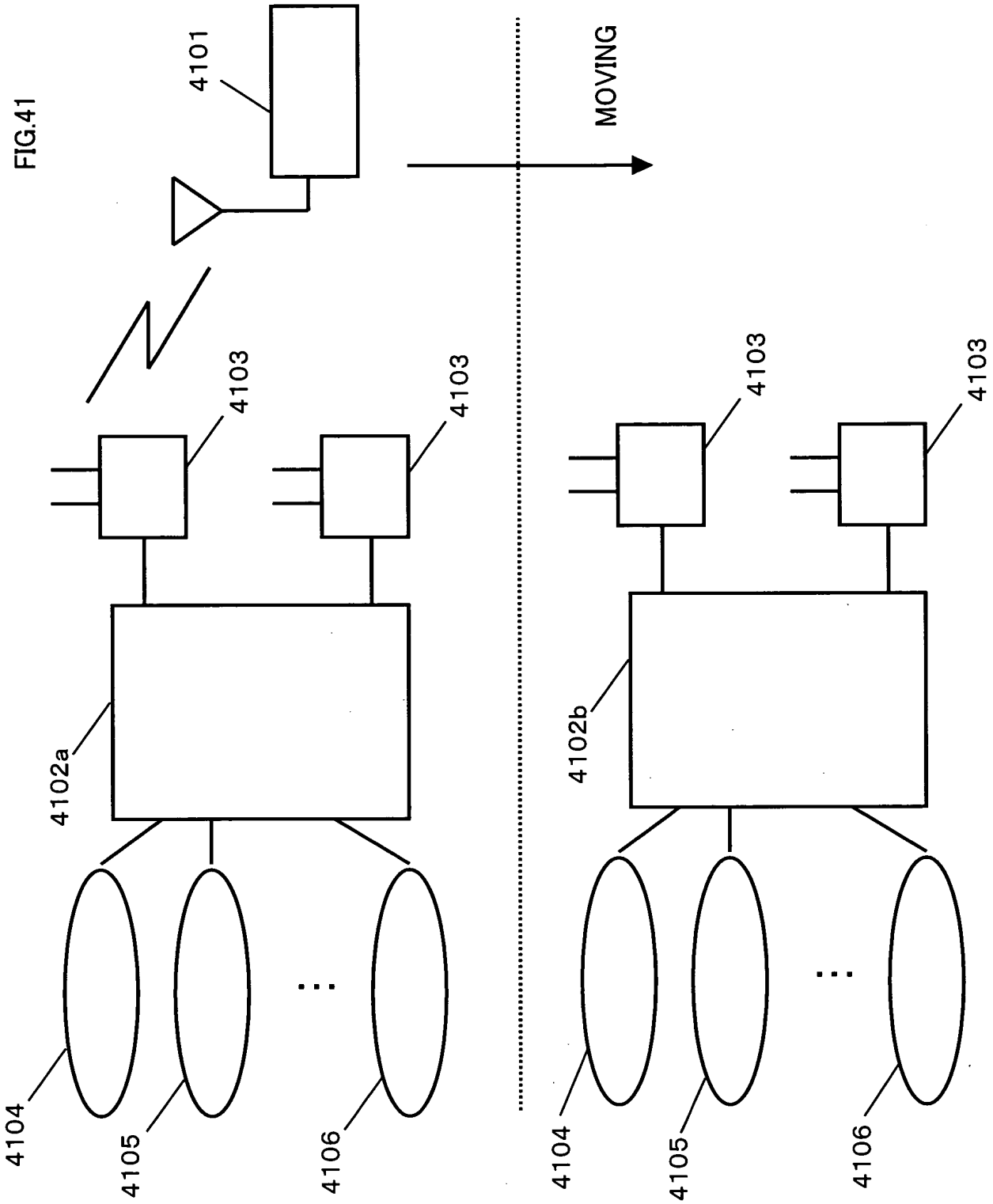
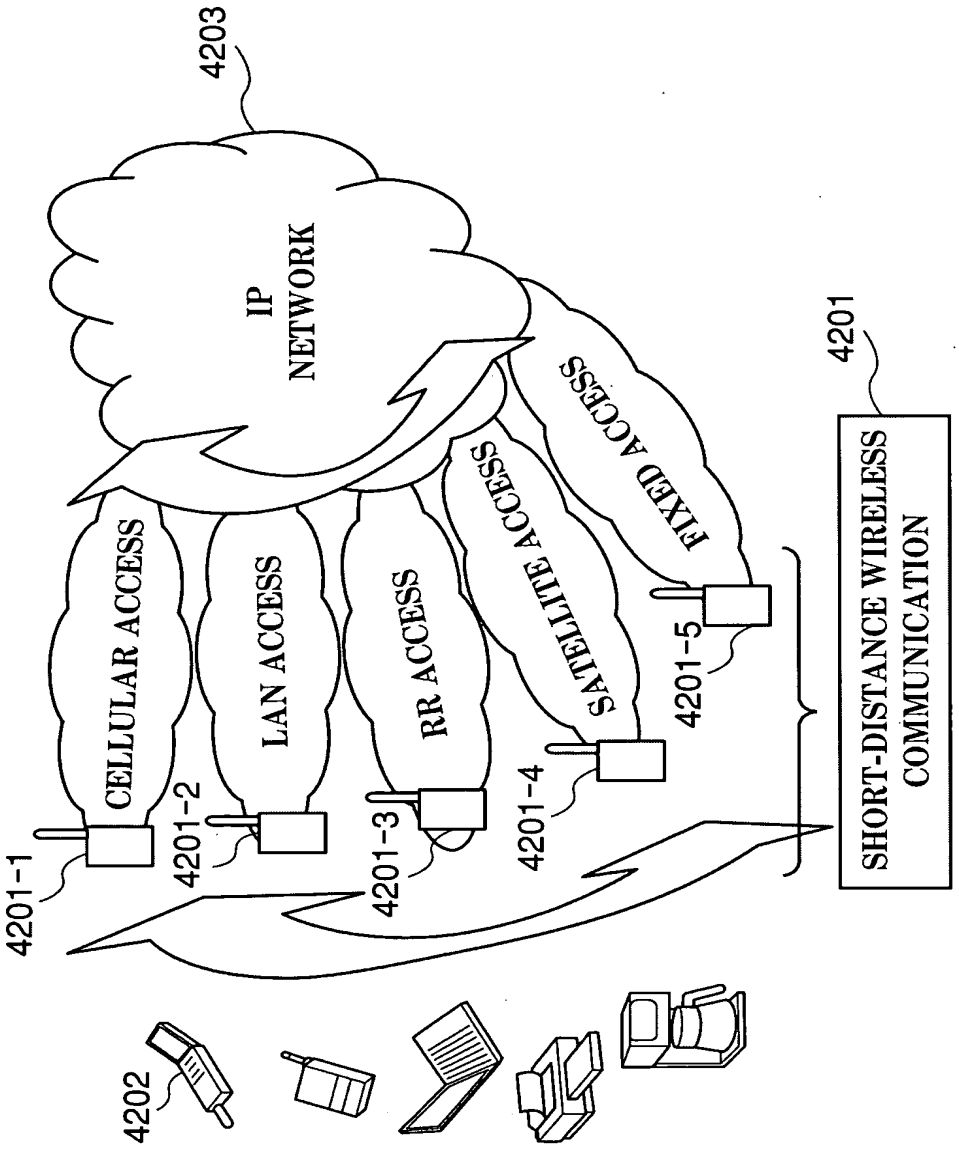

4101
MOVING
4103
4103
4103
4103
4102a
4102b
4104
4105
4106
4104
4105
4106

FIG.42


4203
IP NETWORK
CELLULAR ACCESS
LAN ACCESS
RR ACCESS
SATELLITE ACCESS
FIXED ACCESS
4201
SHORT-DISTANCE WIRELESS COMMUNICATION
4201-1
4201-2
4201-3
4201-4
4201-5
4202

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LIST OF REFERENCES IN THE DRAWINGS

101, 161 MOBILE COMMUNICATION DEVICE

102, 162 MOBILE ROUTER

103, 163 CONNECTION UNIT

104, 164 NETWORK

105, 165 MOBILE COMMUNICATION SYSTEM

201, 701 COMMON WIRELESS INTERFACE

202, 702 COMMON DATA-LINK CONTROL SECTION

203 NETWORK CONTROLLER

204 HIGHER-LAYER PROCESSING SECTION

205 SERVICE-TYPE RECORDING SECTION

206 INTERFACE RECORDING SECTION

207 INTERFACE DECISION SECTION

701 COMMON WIRELESS INTERFACE

702 COMMON DATA-LINK CONTROL SECTION

703 NETWORK CONTROLLER

704 HIGHER-LAYER PROCESSING SECTION

705 INTERFACE-TYPE RECORDING SECTION

706 CONNECTION-INTERFACE RECORDING SECTION

707 WIRELESS INTERFACE

708 DATA-LINK CONTROL SECTION

709 EXTERNAL-LINK MONITOR SECTION

111 INTERFACE-CANDIDATE SELECTION SECTION

121 CONNECTION-INTERFACE DECISION SECTION

171 MOBILE ROUTER SELECTION SECTION

172 COLLECTION-TIMER MANAGING SECTION

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191 CONNECTION CONTROL SECTION

192 EXTERNAL-LINK MONITOR SECTION

194 COMMUNICATION-REQUEST-ACCEPTANCE DECISION SECTION

361 TIMER MANAGING SECTION

4101 MOBILE COMMUNICATION DEVICE

4102 LINE CONTROL

4103 WIRELESS BASE STATION

4104 NETWORK

4201 ACCESS NETWORK TERMINAL DEVICE

4202 MOBILE COMMUNICATION DEVICE

4203 NETWORK